

## CLAIMS

1. An electrodeless low-pressure discharge lamp comprising  
a discharge vessel enclosing a gas-tight discharge cavity containing an  
ionizable fill, the discharge vessel having a light-transmitting bulb portion and a  
5 reentrant tube protruding into the discharge cavity, the bulb portion and the  
reentrant tube each having a surface facing to the discharge cavity;  
a means arranged at least partially in the reentrant tube for exciting  
discharge in the ionizable fill;  
an UV-to-visible-converting layer applied only to said surface of the bulb  
10 portion; and  
an UV reflecting layer applied to said surface of the reentrant tube.
2. The electrodeless low-pressure discharge lamp of claim 1 in which the  
means for exciting discharge in the ionizable fill comprises a supply electronics  
15 surrounded by a housing and connected to a coil.
3. The electrodeless low-pressure discharge lamp of claim 1 in which the  
UV-to-visible-converting layer comprises at least one phosphor layer activated  
by at least one rare earth element.
- 20 4. The electrodeless low-pressure discharge lamp of claim 1 in which the  
UV reflecting layer is made of one of the compounds belonging to the group of  
 $\text{Al}_2\text{O}_3$ , anatase  $\text{TiO}_2$ ,  $\text{Y}_2\text{O}_3$ ,  $\text{La}_2\text{O}_3$ ,  $\text{MgO}$ ,  $\text{SiO}_2$ , aluminum-silicate and  $\text{CaP}_2\text{O}_7$ .
- 25 5. The electrodeless low-pressure discharge lamp of claim 1 in which the  
UV reflecting layer has a coating weight resulting in a reflection coefficient of at  
least 0.7.

6. The electrodeless low-pressure discharge lamp of claim 5 in which the UV reflecting layer has a coating weight resulting in a reflection coefficient of at least 0.9.

- 5           7. The electrodeless low-pressure discharge lamp of claim 1 in which the ionizable fill comprises mercury and an inert gas, the UV-to-visible-converting layer is a tri-phosphor layer and the UV reflecting layer is of aluminum oxide with a coating weight of 4.5 mg/cm<sup>2</sup>.

[illegible]